

**Notice of Allowability**

Application No.

09/734,475

Examiner

Andrew C. Flanders

Applicant(s)

YUEN ET AL.

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 06 March 2006.
2. ☒ The allowed claim(s) is/are 22-41.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### *Allowable Subject Matter*

Claims 22 – 41 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding **Claim 22**, Schneider (U.S. 6,694,027) discloses:

A method of delivering a surround-sound audio signal (eleven channels; col. 4 lines 17 – 21) lines over the internet to a client using Internet stereo sound streaming techniques (transmitted using conventional transmission formats, known formats

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disclosed as including two channel transmission media over the internet; col. 1, lines 23-33; col. 5 lines 44 – 46), the method comprising:

providing a 5.1 channel audio input signal at an internet broadcast location (11A-14A, 23; transmitted using conventional transmission formats, known formats disclosed as including two channel transmission over the internet; col. 1 lines 21 – 33; col. 5 lines 44 – 46; physical “location” inherent to implementation of encoder system of Fig. 3A);

encoding the 5.1 channel audio input signal into two channels of transmit audio (with 10A, 10B, and 20; 5-2-5 matrix encoded output of encoder 20; two channel transmission format disclosed by Schneider; col. 1 lines 23-33; col. 4 lines 35 – 37)

converting the two channels of transmit audio (result of 5-2-5 matrix encoding aspect of 20) into a streaming format for transmission over the internet (also function of 20; col. 4 lines 35 – 37; col. 5 lines 37 – 47; Fig. 3A),

transmitting the streaming format (col. 5 lines 44 – 46) to a client location (site of physical implementation of system comprising decoder of Fig. 3B in internet audio transmission arrangement);

recovering the streaming format of the encoded audio signal into an encoded two-channel audio format (function of 30, two channels necessary for complementary 5-2-5 decoding aspect of 30; col. 4 lines 35 – 39);

decoding the two channels of receive audio (two encoded channels form transmission stream initially encoded by 5-2-5 encoder (20); col. 1 lines 23 – 33; col. 4 lines 35 – 39) into a 5.1 channel audio output signal (outputs 43A-47A, 34 for application of the signal to system outputs; col. 5 lines 53 – 67; col. 6 lines 1 – 13).

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Schneider does not explicitly teach:

processing the 5.1 channel audio output signal into a two-channel audio output signal, wherein the two-channel audio output signal is configured to simulate 5.1 channel audio when played on a pair of loudspeakers

Klayman (WO 98/20709) discloses:

processing the 5.1 channel audio output signal into a two-channel audio output signal (page 12, lines 3 – 10), wherein the two-channel audio output is configured to simulate 5.1 channel audio when played on a pair of loudspeakers (page 32, lines 13 – 29; page 15, lines 12 – 25)

enhancing the two-channel audio signal for playback by the client (page 17, lines 19 – 23) said enhancing comprising:

correcting a perceived width of the apparent sound stage associated with the two-channel audio output signal (page 17 lines 19 – 23)

Neither Schneider nor Klayman explicitly disclose the ~~enhancing~~ <sup>enhancing comprising</sup> comprising:

enhancing a bass response associated with the two-channel audio output signal comprising:

filtering the two-channel audio output signal at a first frequency with a first band pass filter;

filtering the two-channel audio output signal at a second frequency with at least a second band pass filter, wherein the second frequency is different than the first frequency; and

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filtering the two-channel audio output signal at a third frequency with a third band pass filter, wherein the third frequency is different than the first and second frequency

correcting a perceived height of an apparent sound stage associated with the two channel audio output signal.

Klayman (EP 0756437 A2) discloses:

enhancing a bass response associated with the two-channel audio output signal (col. 26 line 53 – col. 27 line 13; or col. 37 lines 49 – 58) comprising:

correcting a perceived height of an apparent sound stage associated with the two channel audio output signal (col. 27 lines 33 – 46; col. 39 lines 29 – 49).

Combining Schneider with Klayman '709 and Klayman '437 would not have been obvious to one of ordinary skill in the art without the aid of Applicant's disclosure. The prior art of record lacks any specific motivation for changing the operation of Schneider to re-convert the output back down to 2 channels. Further, it would have been even less obvious to add the enhancement method taught by Klayman '437 to Schneider with Klayman '709.

Furthermore, neither of the three references (considered to be the closest prior art of record) do not disclose filtering with three bandpass filters at three different frequencies. Klayman '437 discusses bass enhancement in cols. 37 and 38, but only uses single low pass filter rather than the three bandpass filters filtering at three different frequencies.

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**Claims 29 and 36** are allowable for the same reasons as stated above regarding claim 22.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Flanders whose telephone number is (571) 272-7516. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7546. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**SINH TRAN  
SUPERVISORY PATENT EXAMINER**

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